

## United States Patent and Trademark Office



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

| APPLICATION NO. | FILING DATE                    | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |  |
|-----------------|--------------------------------|----------------------|---------------------|------------------|--|
| 10/696,816      | 10/30/2003                     | Timothy A. Rost      | TI-35257            | 1301             |  |
| 23494           | 7590 06/29/2006                |                      | EXAMINER            |                  |  |
| TEXAS INS       | TEXAS INSTRUMENTS INCORPORATED |                      |                     | CRANE, SARA W    |  |
| P O BOX 65      | 5474, M/S 3999                 |                      | ART UNIT            |                  |  |
| DALLAS, T       | DALLAS, TX 75265               |                      |                     | PAPER NUMBER     |  |
|                 |                                |                      | 2811                |                  |  |

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Application No.                                                                                                                                                   | Applicant(s)                                                               |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|--|--|--|
| Office Action Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10/696,816                                                                                                                                                        | ROST ET AL.                                                                |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Examiner                                                                                                                                                          | Art Unit                                                                   |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Sara W. Crane                                                                                                                                                     | 2811                                                                       |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                   |                                                                            |  |  |  |
| A SH<br>WHIC<br>- Exter<br>after<br>- If NO<br>- Failu<br>Any I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ORTENED STATUTORY PERIOD FOR REPLY CHEVER IS LONGER, FROM THE MAILING DANS IN THE MAIL | ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tin will apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE | N. nely filed the mailing date of this communication. D (35 U.S.C. § 133). |  |  |  |
| Status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                   |                                                                            |  |  |  |
| 2a)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Responsive to communication(s) filed on <u>14 Ju</u> This action is <b>FINAL</b> . 2b) This Since this application is in condition for allowan closed in accordance with the practice under E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | action is non-final.  nce except for formal matters, pro                                                                                                          |                                                                            |  |  |  |
| Dispositi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ion of Claims                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                   |                                                                            |  |  |  |
| 5)⊠<br>6)□<br>7)□                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Claim(s) 2 and 4-10 is/are pending in the application of the above claim(s) is/are withdraw Claim(s) 2 and 4-10 is/are allowed.  Claim(s) is/are rejected.  Claim(s) is/are objected to.  Claim(s) are subject to restriction and/or                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | vn from consideration.                                                                                                                                            |                                                                            |  |  |  |
| Applicati                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ion Papers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                   |                                                                            |  |  |  |
| 10)[🔀                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | The specification is objected to by the Examiner The drawing(s) filed on 3/1/64 is/are: a) access Applicant may not request that any objection to the Replacement drawing sheet(s) including the correction The oath or declaration is objected to by the Examiner                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | epted or b) bjected to by the lidrawing(s) be held in abeyance. See ion is required if the drawing(s) is object.                                                  | e 37 CFR 1.85(a).<br>jected to. See 37 CFR 1.121(d).                       |  |  |  |
| Priority u                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ınder 35 U.S.C. § 119                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                   |                                                                            |  |  |  |
| <ul> <li>12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).</li> <li>a) All b) Some * c) None of:</li> <li>1. Certified copies of the priority documents have been received.</li> <li>2. Certified copies of the priority documents have been received in Application No</li> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                   |                                                                            |  |  |  |
| 2) Notice 3) Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | t(s) te of References Cited (PTO-892) te of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO-1449 or PTO/SB/08) or No(s)/Mail Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4) Interview Summary Paper No(s)/Mail D 5) Notice of Informal F 6) Other:                                                                                         |                                                                            |  |  |  |

Application/Control Number: 10/696,816

Art Unit: 2811

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims.

The "lower metal interconnect lever" is not shown in any of the drawings. The specification notes (middle of page 5) that the layer is not shown for simplicity. However, this is confusing to one reading the claims, and trying to find the features of the claims in the drawings. (Apparently, the "topmost" metal in the claims is the bottom metal in the drawings.) At least one of the drawings should be modified to indicate that layers have been left out. Perhaps a numeral could be added, with reference to the specification, to indicate the missing layer(s).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

Art Unit: 2811

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

This application is in condition for allowance except for the following formal matters:

As noted above, "the lower metal interconnect level located over the semiconductor body" is not shown in the drawings.

Prosecution on the merits is closed in accordance with the practice under *Ex* parte Quayle, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO**MONTHS from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Crane, whose telephone number is (571) 272-1652.

The supervisor for Art Unit 2811, Eddie Lee can be reached on (571) 272-1732. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Application/Control Number: 10/696,816

Art Unit: 2811

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sara W. Crane
Primary Examiner
Art Unit 2811

Page 4